

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Rayborn et al

Serial No.: 09/994,910

Filed: November 16, 2001

Confirmation No. 7679

Examiner: Amina Khan

Art Unit: 1751

For: **TREATED TEXTILE ARTICLE HAVING  
IMPROVED MOISTURE TRANSPORT**

Commissioner for Patents

P O. Box 1450

Alexandria, VA 22313-1450

Sir:

**DECLARATION UNDER 37 CFR 1.131**

I, Richard Barnhardt, declare that:

1. I am the technical director of Apollo Chemical Corporation, the assignee of the above-referenced invention.

2. Exhibit A is a true and exact copy of a page from a laboratory notebook prepared on November 4, 1999 by Randall L. Rayborn.

3. Exhibit A shows the manufacture of Treatment Agent Sample 1 as claimed and described by the present application. Table 5, and its accompanying description, as contained in the present application shows the ingredients, amounts, and synthesis methods used to make Treatment Sample Agent 1. Table 5, and its accompanying description, are virtually identical to the ingredients, amounts, and synthesis methods contained in Exhibit A. The composition "2,2'-[1,2 ethanediylbis (oxy)] bis [ethaneamine]" identified in Table 5, is identified as "Huntsman XTJ-504" in Exhibit A. The composition "oxirane, methyl-, polymer with oxirane, bis (2-aminopropyl) ether" identified in Table 5 is identified as "Huntsman XTJ-502" In Exhibit A. Hexanedioic acid, the acid identified in Table 5, is the IUPAC systematic name for adipic acid, the acid identified in the Exhibit A.

4. I acknowledge that willful false statements and the like are punishable by fine or imprisonment, or both (18 U.S.C. 1001) and may jeopardize the validity of the application or any patent issuing thereon. All statements made on my own knowledge are true and that all statements made on information and belief are believed to be true.

Respectfully submitted,



Richard Barnhardt

Date: May 9, 2007  
File No.: 1067-021

## **Exhibit A**

# TITLE

PROJECT NO.

BOOK NO.

11/4/99

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## HNP Rxn

Purpose: Increase Hydrophilicity by replacing XT3-50x with XT3-502 (molar).

| RAW MATERIAL         | Mol. Wt | Moles  | Grams  | % (pts) | Molar ratio |
|----------------------|---------|--------|--------|---------|-------------|
| Hexamethylenediamine | 116     | 0.1232 | 14.29  | 0.0286  | 0.330       |
| Huntsman XT3-50x     | 148     | 0.0373 | 5.53   | 0.0111  | 0.100       |
| Huntsman XT3-502     | 2000    | 0.2128 | 425.67 | 0.8513  | 0.570       |
| Adipic Acid          | 146     | 0.3734 | 54.52  | 0.1090  | 1.000       |

ATMDA is at 70% chrg = 20.14 gm

- 8:30 - 1) Chrg HMDA, XT3-50x & Adipic Acid, begin heating
- 9:00 → Product solid chunks at  $\approx 60^{\circ}\text{C}$
- 9:30 → Product fluid ( $100^{\circ}\text{C}$ )
- 10:30 → Temp =  $150^{\circ}\text{C}$ ; Distillation / water starts
- 11:00 → Temp =  $175^{\circ}$
- 11:00 2) Begin pulling vacuum (18 inches)
- 11:30 3) Terminate vacuum
- 12:00 4) Chrg XT3-502 ( $105^{\circ}\text{C}$ ) Temp drops to  $130^{\circ}\text{C}$
- 12:05 - 1:10 → held at  $130-140^{\circ}\text{C}$
- 2:00 → Temp =  $200^{\circ}\text{C}$
- 2:00 5) Begin vacuum (18")
- 2:30 →  $215^{\circ}\text{C}$

SCIENTIFIC BINDERY PRODUCTIONS CHICAGO 60605 MADE IN USA

SIGNATURE

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DISCLOSED TO AND UNDERSTOOD BY

DATE

WITNESS

DATE

11/4/99

DATE

11-4-99